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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Qiang Qiu

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EXAMINER

LO, SUZANNE

ART UNIT

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2128

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/655,955	Applicant(s) QIU, QIANG	
	Examiner SUZANNE LO	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7,8,10,13,14,17,18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,8,10,13,14,17,18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2128

DETAILED ACTION

1. Claims 1, 4-5, 7-8, 10, 13-14, 17-18, and 20-21 have been presented for examination. In view of the Appeal Brief filed on 16 June 2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below. A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. **Claims 1,4-5, 10, 14, and 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fittanto et al. ("Overview of CARAT-4, a Multi-body Simulation and Collision Modeling Program")** in view of **Woll et al. (U.S. Patent No. 5,581,464)**.

As per **claim 1**, Fittanto is directed to a method for analyzing driving data of at least two vehicles involved in a collision, comprising: calculating a three-dimensional, kinematic model (**page 13, Introduction**) of at least two vehicles (**Figures 12-14**), the model including at least one linear-motion-dynamics signal (**page 21, 2nd column, last paragraph**) and at least one lateral-motion-dynamics signal (**page 21, 2nd column, last paragraph**) and wherein a time basis for the at least one linear-motion-

Art Unit: 2128

dynamics signal and at the at least one lateral-motion-dynamics signal is provided by a real-time clock and recorded and wherein the time basis is common to the at least two vehicles (**Figures 15-16 and accompanying text**), and visually representing the three-dimensional, kinematic model of the at least two vehicles involved in the collision (**Figures 12-14 and accompanying text**) but fails to explicitly disclose a radar signal of an adaptive cruise control system of each of the at least two vehicles wherein the at least one lateral-motion-dynamics signal includes a rotational-rate signal of a yaw sensor and wherein the radar signal of the adaptive cruise control system and the time basis provided by the real-time clock are utilized to determine relative positions of the at least two vehicles.

Woll teaches a radar signal of an adaptive cruise control system of each of the at least two vehicles (**column 3, lines 45-59**) wherein the at least one lateral-motion-dynamics signal includes a rotational-rate signal of a yaw sensor (**column 4, lines 10-18**) and wherein the radar signal of the adaptive cruise control system (**column 3, lines 40- 59**) and the time basis provided by the real-time clock (**column 4, lines 57-64**) are utilized to determine relative positions of the at least two vehicles (**column 3, line 60 – column 4, line 7**).

Fittanto and Woll are analogous art because they are both from the same field of endeavor. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the method of analyzing driving data of Fittanto with the radar signal and yaw sensor of Woll in order to make accident reconstruction more reliable and less expensive (**Woll, column 11, lines 59-62**).

As per claim 5, the combination of Fittanto and Woll already discloses the method as recited in claim 1, wherein: the at least one lateral-motion-dynamics signal further includes at least one of lateral-acceleration signals and steering-angle signals (**Woll, column 4, 2-18**).

As per claim 6, the combination of Fittanto and Woll already discloses the method as recited in claim 1, further comprising: utilizing a radar signal (**Woll, column 3, lines 46-59**).

Art Unit: 2128

As per claim 10, the combination of Fittanto and Woll is directed to a system for analyzing vehicle data of at least two vehicles involved in a collision, comprising components to perform the method steps of claim 1 and are therefore rejected over the same art combination.

As per claims 14 and 18, the combination of Fittanto and Woll is directed to a computer program stored on a computer-readable medium having a program-code that when executed on one of a computer and a processing unit results in a performance of the method steps of claim 1 and 5 and is therefore rejected over the same art combination.

3. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fittanto et al. ("Overview of CARAT-4, a Multi-body Simulation and Collision Modeling Program") in view of Woll et al. (U.S. Patent No. 5,581,464) **in further view of Baque et al. (U.S. Patent No. 6,246,933 B1)**.

As per claim 4, the combination of Fittanto and Woll already discloses the method as recited in claim 1, wherein: the at least one linear-motion-dynamics signal includes at least one of speed signals of all wheels, vehicular-speed signals, longitudinal-acceleration signals (**Woll, column 4, lines 2-18**) but fails to explicitly teach a GPS signal. Baque teaches wherein linear-motion-dynamics includes a GPS signal (**column 9, line 64- column 10, line 3**). Fittanto, Woll, and Baque are analogous art because they are all from the same field of endeavor, analyzing driving data. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the method of analyzing driving data of Fittanto and Woll with the GPS signal of Baque in order to make accident reconstruction more reliable and less expensive (**Woll, column 4, lines 16-18**).

As per claim 17, the combination of Fittanto, Woll, and Baque is directed to a computer program stored on a computer-readable medium having a program-code that when executed on one of a computer and a processing unit results in a performance of the method steps of claim 4 and is therefore rejected over the same art combination.

4. **Claims 7 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fittanto et al. (“Overview of CARAT-4, a Multi-body Simulation and Collision Modeling Program”) in view of Woll et al. (U.S. Patent No. 5,581,464) **in further view of Hathout et al. (U.S. Patent No. 6,675,074 B2).**

As per claim 7, the combination of Fittanto and Woll is directed to the method as recited in claim 1, but fails to specifically disclose wherein a rotational-rate signal of an ESP system is utilized as the rotational-rate signal of the yaw sensor. Hathout teaches utilizing a rotation-rate signal of an ESP system **(column 3, lines 1-9)**. Fittanto, Woll and Hathout are analogous art because they are from the same field of endeavor, recording driving data. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the method of analyzing driving data of Fittanto and Woll with the rotational-rate signal of Hathout in order to better calculate positions in real time **(Hathout, column 3, lines 1-9)**.

As per claim 20, the combination of Fittanto, Woll, and Hathout is directed to a computer program having a program-code that when executed on one of a computer and a processing unit results in a performance of the method steps of claim 7 and is therefore rejected over the same art combination.

5. **Claims 8, 13, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fittanto et al. (“Overview of CARAT-4, a Multi-body Simulation and Collision Modeling Program”) in view of Woll et al. (U.S. Patent No. 5,581,464) **in further view of Rayner (U.S. Patent No. 6,718,239 B2).**

As per claim 8, the combination of Fittanto and Woll is directed to the method as recited in claim 1, but fails to specifically disclose further comprising: outputting a message based on the at least one linear-motion-dynamics signal and the at least one lateral-motion-dynamics signal in response to a predeterminable event. Rayner teaches outputting a message based on linear and lateral dynamics signals **(column 5, line 63 – column 6, line 2)**. Fittanto, Woll, and Rayner are analogous art because they are

Art Unit: 2128

from the same field of endeavor, recording driving data. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the method of analyzing driving data of Fittanto and Woll with the output message of Rayner in order to provide feedback to an operator **(Rayner, column 5, line 63 – column 6, line 2).**

As per claim 13, the combination of Fittanto, Woll, and Rayner is directed to a device for acquiring vehicle data, comprising components to perform the method steps of claim 8 and is therefore rejected over the same art combination.

As per claim 21, the combination of Fittanto, Woll, and Rayner is directed to a computer program having a program-code that when executed on one of a computer and a processing unit results in a performance of the method steps of claim 8 and is therefore rejected over the same art combination.

Response to Arguments

6. Applicant's arguments with respect to prior art rejections have been considered but are moot in view of the new grounds of rejection.

Conclusion

7. The prior art made of record is not relied upon because it is cumulative to the applied rejection. These references include:

1. U.S. Patent No. 6,748,305 B1 issued to Klauser et al. on 06/08/04.
2. U.S. Patent No. 5,826,206 issued to Nemeth on 10/20/98.
3. U.S. Patent No. 6,535,804 B1 issued to Chun on 03/18/03.

8. All Claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne Lo whose telephone number is (571)272-5876. The examiner can normally be reached on M-F, 8-4:30.

Art Unit: 2128

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571)272-2297. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

Suzanne Lo
Patent Examiner
Art Unit 2128

/SL/
08/29/08